Applicants have cancelled all of the originally-filed Claims, 1 through 24. New Claims, 25 through 48, have been added to better encompass the full scope and breadth of the invention notwithstanding Applicants belief that the Claims would have been allowable as originally filed. Accordingly, Applicants assert that no Claims have been narrowed within the meaning of *Festo*.

A U.S. format Abstract is provided.

A PTO 1449 listing all of the references cited in the International Search Report is provided.

Entry of the new Claims and Abstract and early and favorable action on the merits of this application are respectfully solicited.

Respectfully submitted,

THE FIRM OF HUESCHEN AND SAGE

By: G. PATRICK SAGE

G. PATRICK SAGE

Dated: August 9, 2001
Customer No.: 25,666
500 Columbia Plaza
350 East Michigan Ave.
Kalamazoo, MI 49007
(616) 382-0030

Enclosure: Postal Card Receipt
Sequence Listing - Paper copy
Sequence Listing - diskette copy
Abstract of the Disclosure
Claims 25 through 48
PTO 1449

PF91PCTSEQ/dln

CLAIMS

25. The use of an enterobacterium OmpA protein, or of a fragment thereof, associated with the peptide of sequence ELAGIGILYV SEQ ID No. 3, for preparing a pharmaceutical composition useful in generating a cytotoxic T response directed against melanoma cells.

26. The use of an enteroacterium OmpA protein, or of a fragment thereof, associated with the peptide of SEQ ID No. 3, as claimed in claim 25, for preparing a pharmaceutical composition useful in treating or preventing malignant melanomas.

27. The use of claim 25, wherein said enterobacterium OmpA protein, or a fragment thereof, is obtained using a method of extraction from a culture of said enterobacterium.

28. The use of claim 25, wherein said enterobacterium OmpA protein, or a fragment thereof, is obtained via the recombinant route,

29. The use of claim 25, wherein said enterobacterium is *Klebsiella pneumoniae.*

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30. The use of claim 29, wherein the amino acid sequence of said OmpA protein, or a fragment thereof, is selected form the group consisting of :

a) the amino acid sequence of SEQ ID No. 2;

b) the amino acid sequence of a sequence having at least 80% homology with SEQ ID No. 2; and

c) the amino acid sequence of a fragment of at least 5 amino acids of a sequence as defined in a).

31. The use of claim 25, wherein said peptide of SEQ ID No. 3 is coupled to or mixed with said OmpA protein or a fragment thereof.

32. The use of claim 30, wherein said peptide of SEQ ID No. 3 is coupled, by covalent attachment, with said OmpA protein or a fragment thereof.

33. The use of claim 32, wherein the coupling by covalent attachment is produced by chemical synthesis.

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34. The use of claim 33, wherein one or more attachment elements is (are) introduced into said OmpA protein, or a fragment thereof, and/or into said peptide of SEQ ID No. 3, in order to facilitate the chemical coupling.

35. The use of claim 34, wherein said attachment element introduced is an amino acid.

36. The use of claim 32, wherein the hybrid protein resulting from the coupling between said peptide of SEQ ID No. 3 and said OmpA protein, or a fragment thereof, is obtained by genetic recombination.

37. The use of claim 36, wherein the pharmaceutical composition comprises a nucleic acid construct encoding said hybrid protein.

38. The use of claim 37, wherein said nucleic acid construct is contained in a vector, or in a transformed host cell capable of expressing said hybrid protein.

39. The use of claim 25, for preparing a pharmaceutical composition which can be administered by the subcutaneous or intradermal route.

40. The use of claim 25, wherein said pharmaceutical composition is vehicled in a form which makes it possible to improve its stability and/or its immunogenicity.

41. A pharmaceutical composition of claim 25.

42. The pharmaceutical composition of claim 41, wherein the protein is selected from the group consisting of:

1) *Klebsiella pneumoniae* OmpA protein of SEQ ID No. 2;

2) a protein, the sequence of which has at least 80% homology with the SEQ ID No. 2; and

3) a fragment of at least 5 amino acids of said OmpA protein of SEQ ID No. 2;

the protein being associated, by mixing or by coupling, with the peptide of SEQ ID No. 3.

43. A pharmaceutical composition, wherein the protein is selected from the group consisting of

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1) a nucleic acid construct containing a nucleic acid encoding the *Klebsiella pneumoniae* OmpA protein of SEQ ID No. 2;

2) a protein, the sequence of which has at least 80% homology with SEQ ID No. 2; and

3) a fragment of at least 5 amino acids of said OmpA protein of sequence SEQ ID No. 2;

and a nucleic acid encoding the peptide of sequence SEQ ID No. 3.

44. The composition of claim 41, wherein said pharmaceutical composition is vehicled in a form which makes it possible to improve its stability and/or its immunogenicity.

45. The composition of claim 44, wherein said vehicle is a liposome, or a viral vector, or a transformed host cell capable of expressing said OmpA protein, or a fragment thereof, and said peptide of SEQ ID No. 3.

46. The composition of claim 41, wherein said composition is contained in a pharmaceutically acceptable medium.

47, The composition of claim 41, wherein said composition also contains a detergent.

48. The composition of claim 41, without any other adjuvant for inducing a CTL response.

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ABSTRACT OF THE DISCLOSURE

The invention concerns the use of an enterobacterium membrane protein OmpA, in particular of *Klebsiella pneumoniae*, associated with an antigen or a hapten for preparing a hapten for preparing a pharmaceutical composition designed to generate or enhance a cytotoxic T response directed against a tumor cell. The invention also concerns the use of said compounds for preventing or treating infection or cancer, in particular cancers associated with a tumoral antigen such as melanoma, and pharmaceutical compositions comprising some of said compounds.